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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/682,590	10/09/2003	Leonard Forbes	400.257US01	1986

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EXAMINER

TRAN, MAI HUONG C

ART UNIT

PAPER NUMBER

2818

DATE MAILED: 07/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/682,560

Applicant(s)

FORBES, LEONARD

Examiner

Mai-Huong Tran

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(e). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 17-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-945)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restriction

Application's election without traverse of Group II (Claims 1-16) drawn to process of making a semiconductor device is acknowledged for prosecution in the subject application. Accordingly, claims 17-22 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Applicants have the right to file a divisional application covering the subject matter of the non-elected claims.

Claim Rejections - 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-16 are rejected under 35 U.S.C. 103 (a) as being unpatentable over U.S. Patent No. 5,942,781 to Burr et al. in view of Williams et al. (6,078,090).

Regarding to claims 1-7, Burr discloses a method for generating a fully depleted body structure in a silicon-on-insulator device having a substrate 610, the method comprising providing an extractor contact 654 coupled to the body structure; and providing an extractor voltage such that the extractor contact is reverse biased as set forth in col. 4, lines 14-41, fig. 6.

Burr doesn't disclose minority carriers in the body structure are removed.

Williams discloses minority carriers in the body structure are removed (col. 1, lines 63-67, col. 2, lines 14).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to make minority carriers in the body structure to be removed, as taught by Williams in order to decrease power loss, heating, noise and improve circuit efficiencies (col. 1, lines 15-17).

Regarding to claims 8-11, Burr discloses a method for generating a fully depleted body structure in a PMOS silicon-on-insulator device having a substrate 610, a control gate 618/626, a drain region 622, and a source region 620, the method comprising applying an extractor voltage to an extractor contact 654/656 coupled to the body structure; and applying a substrate voltage to the substrate.

Burr does not disclose the extractor voltage is greater than the substrate voltage.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the extractor voltage that is greater than the substrate voltage.

Regarding to claims 12-14, Burr discloses a method for generating a fully depleted body structure in an NMOS silicon-on-insulator device having a substrate 610, a control gate 618/626, a drain region 622, and a source region 620, the method comprising applying an extractor voltage to an extractor contact 654/656 coupled to the body structure; and applying a substrate voltage to the substrate.

Burr does not disclose the extractor voltage is less than the substrate voltage.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the extractor voltage that is less than the substrate voltage.

Regarding to claims 15-16, Burr discloses a method for generating a fully depleted body region in an NROM flash memory device using a silicon-on-insulator structure, the device having a substrate 610, a control gate 618/626, a drain region 622, and a source region 620, the method comprising applying an extractor voltage to an extractor contact 654/656 coupled to the body structure; and applying a substrate voltage to the substrate.

Burr does not disclose the extractor voltage is less than the substrate voltage.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the extractor voltage that is less than the substrate voltage.

Conclusion

Any inquiry concerning this communication on earlier communications from the examiner should be directed to Mai-Huong Tran, (571) 272-1796. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 6:30 PM. The examiner's supervisor, David Nelms can be reached on (571) 272-1787.

The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Mai-Huong Tran



David Nelms
Supervisory Patent Examiner
Technology Center 2800